



Salt Division

8 March 1993

Dermott Courtney
Underground Injection Control Section
USEPA Region II
Jacob J. Javits Federal Building
New York NY 10279-0012

Ref: UIC Permit NYU 63860

Dear Mr. Courtney:

A Spill Prevention, Control and Countermeasure Plan (SPCC) for the use of fuel oil as a padding material in the recently completed Well 58 at our Watkins Glen, New York salt refinery has been submitted to the State of New York. A copy is provided here for your information; this completes our response to the issues raised in your letter of 5 January 1993.

If you require any further information, please call me at 717/587-9353.

Sincerely,

Michael J. Schumacher
Minerals Development Engineer

cc: J. Loose
J.A.C. Atkins

MJS/mjs

courtney

Akzo Salt Inc.
Abington
Executive Park
P O Box 352
Clarks Summit,
Pennsylvania
18411-0352
Phone and Fax:
717/587-5131
Cable: ISCO,
Clarks Summit, PA
Telex: 83-1872

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

Prepared for:

**Akzo Salt Inc.
Watkins Glen Refinery
Watkins Glen, New York 14891**

February 16, 1993

DUNN ENGINEERING COMPANY

Environmental, Civil and Geotechnical Engineers

12 Metro Park Road

Albany, NY 12205

Tel: 518/458-1313

Fax: 518/458-2472



SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN FOR WELL #58

Prepared for:

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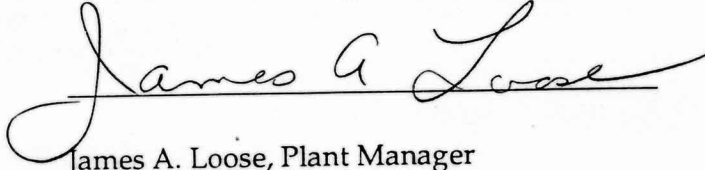
Prepared by:

DUNN ENGINEERING COMPANY
12 Metro Park Road
Albany, New York 12205

Date:

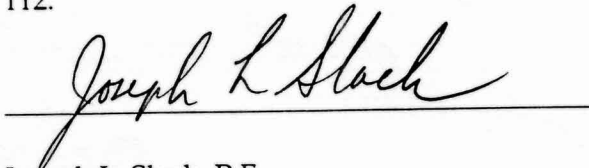
February 16, 1993

I certify that this plan will be implemented as herein described. The maintenance supervisor has the authority to implement any and all of the procedures described herein in the event of a real, or perceived emergency.

A handwritten signature in cursive script, reading "James A. Loose", written over a horizontal line.

James A. Loose, Plant Manager
Akzo Salt Inc., Watkins Glen Refinery

I certify that this plan has been prepared in accordance with good engineering practice and fulfills the requirements of U.S. Environmental Protection Agency as set forth in 40 CFR Part 112.

A handwritten signature in cursive script, reading "Joseph L. Slack", written over a horizontal line.

Joseph L. Slack, P.E.
DUNN Engineering Company

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1.0 GENERAL INFORMATION

1.1 Introduction

Akzo Salt Inc. (AKZO) intends this Spill Prevention, Control, and Countermeasures (SPCC) Plan to meet the requirements of the U.S. Environmental Protection Agency (40 CFR 112).

1.2 Facility Description

The facility description is as follows:

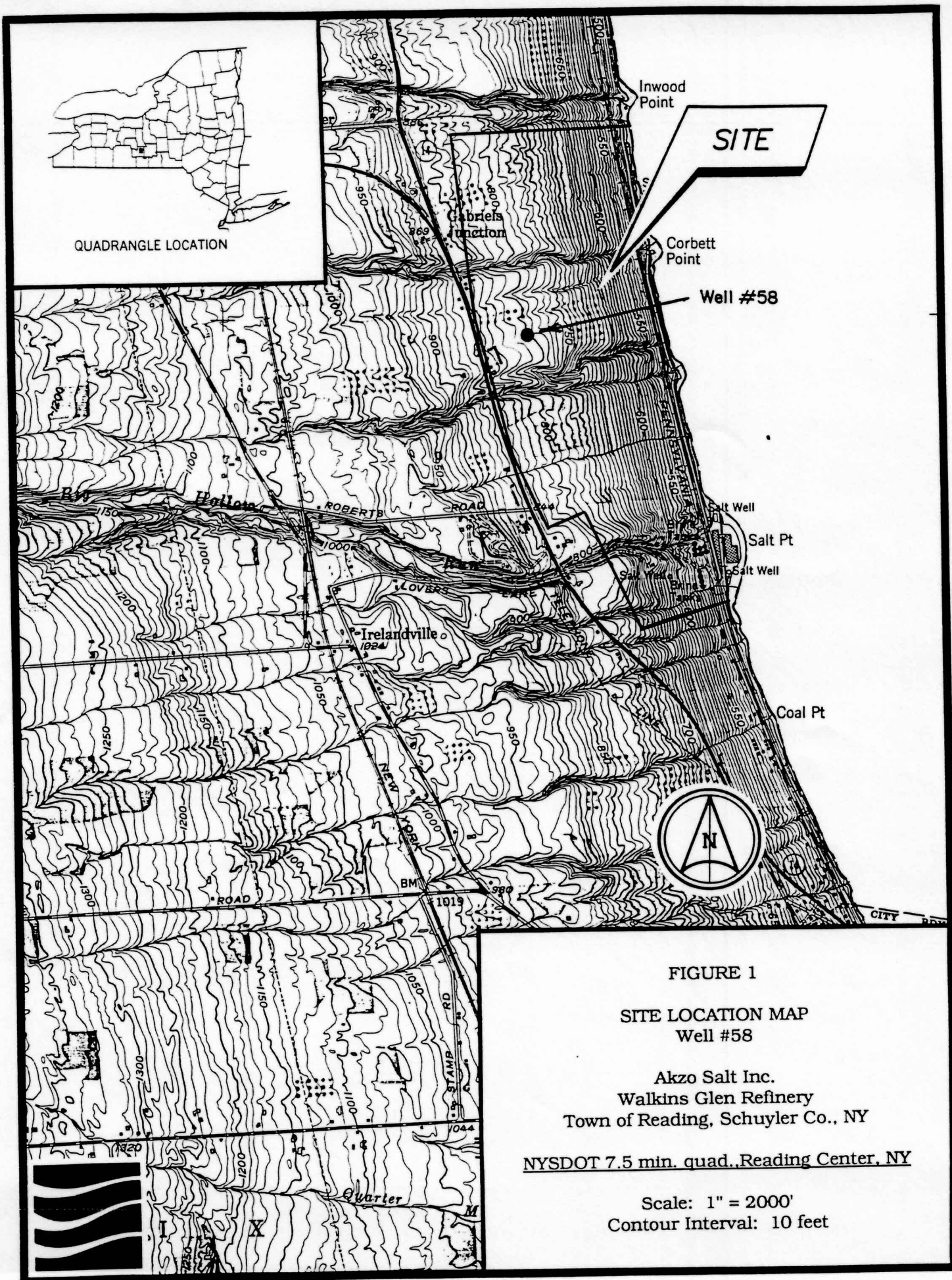
- A. Name: Akzo Salt Inc., Watkins Glen Refinery
- B. Type: Brine Solution Mining and Refinery
- C. Location: The mine and refinery are located at Salt Point on the west bank of Seneca Lake, immediately north of Watkins Glen. (see site location map, Figure 1).

Latitude: 42 degrees 25 minutes north.

Longitude: 75 degrees 53 minutes 30 seconds west.

Address: Town of Reading
County of Schuyler
Salt Point Road
Watkins Glen, New York 14891
(607) 535-2721

- D. Owner/Operator: Akzo Salt Inc.
P.O. Box 352
Clarks Summit, Pennsylvania 18411-0352



- E. Designated Person Accountable for Oil Spill Prevention at the facility:
James A. Loose, Plant Manager

This facility consists of brine solution mining operations and a salt refinery. Solution mining involves the injection of a liquid to dissolve a mineral and extracting the solution for processing. Akzo intends to use water to dissolve salt deposits and extract the brine solution for processing at the refinery. This plan focuses on Well #58 where solution mining will include the placement of #2 fuel oil to form a protective pad on the surface of the brine to inhibit upward vertical growth and promote horizontal solutioning of the cavern. This solution mining method is a common practice and has been accepted elsewhere by the New York State Department of Environmental Conservation (NYSDEC) - Division of Mineral Resources on December 11, 1992.

1.2.1 Facility Drainage

Well #58 is located in an open parcel of land that slopes moderately toward Seneca Lake. Surface runoff flows overland east or southeast for approximately 200 feet to drainage swales. There are two drainage swales that collect runoff from this area. The drainage swales slope from west to east and drain into Seneca Lake approximately 2,100 feet downstream.

1.3 Spill History

In February 1975, a small spill of #2 fuel oil from a gauge line occurred. A description of the spill and the timely response can be found in the spill notification letter sent to the New York State Department of Environmental Conservation (NYSDEC) dated February 27, 1975 included in Appendix A of this report.

2.0 ANTICIPATED SPILLS/FATE OF SPILLED PRODUCT

2.1 Anticipated Spills

There are three possibilities for an oil spill to occur. These are as follows:

- During the Injection Process
- Having an Annulus Leak
- During Transfer of Brine through Product Lines Following Failure of the Well Tubings

2.2 Injection Process

The injection process has the highest probability to produce an oil spill. A single injection event will introduce up to five thousand gallons of #2 fuel oil into the cavern. A tanker truck will deliver the oil to the well using an unimproved access road from NYS Route 14. The oil will be transferred from the tanker to the cavern by a pump. The pump will inject the oil at approximately 425 psi.

Any oil spilled during the transfer/injection process that is not contained by the secondary containment system (see Section 4.2) would flow overland to the drainage swales, which ultimately drain into Seneca Lake.

2.3 Annulus Leak

An annulus leak is less likely to occur, but could result in an oil spill. The casing is cemented to the surface and the seal has been demonstrated to be tight by means of a cement bond log and an internal mechanical integrity test.

Due to the working pressure of the well, all oil released from this type of failure may not be contained within the secondary containment system. Spilled oil could flow overland into the two drainage swales which ultimately drain into Seneca Lake.

2.4 Product Lines

Oil could enter the product brine stream in the event of production tubing failure. If oil entered the brine stream it would be conveyed through a closed piping system into the lined brine pond where it would float on top of the brine and could be recovered.

3.0 PREVENTION

3.1 Personnel, Training, and Spill Prevention Procedures

Akzo personnel involved in the injection process are properly instructed in operation and maintenance of equipment to prevent oil discharge and the applicable pollution control laws, rules, and regulations.

The plant manager is responsible for ensuring that each employee involved in the injection process and daily monitoring is familiar with the procedures for cleanup and reporting of a spill. Scheduled prevention briefings for personnel are conducted to assure adequate understanding of the SPCC plan and to discuss any potential problems or changes in the SPCC plan. Also, any spill regardless of size or containment will be reported to the maintenance supervisor. The maintenance supervisor will review the information and procedures and take corrective action to prevent similar releases in the future.

3.2 Injection Process

The oil injection process takes place on the containment slab. The tanker truck will park such that the valve connections are over the concrete slab. The pump that transfers the oil from the tanker into the well is also placed on this slab.

Prior to the injection process, the pump valves and piping will be visually inspected. Maintenance of the pump is performed as needed.

The secondary containment area will be thoroughly inspected before each use and all necessary repairs will be completed before its use.

During the transfer of product, the driver and a Akzo employee continuously monitor the injection process. If a problem is detected, the transfer will be immediately stopped by using

shut off valves and emergency cutoff switches. The maintenance supervisor will be informed if any problems are detected or foreseen.

After injection the Akzo employee will close the double valved pipe system and secure the pipe with a bolted flange plate.

3.3 Annulus Leak

Prior to injection, the Akzo employee responsible for transfer will visually inspect the wellhead. If any problems are detected or foreseen, the maintenance supervisor will be notified immediately and corrective action taken prior to injection.

3.4 Product Lines

A daily visual inspection of the brine pond is performed by designated personnel. Prior to injection, the piping will be visually inspected and any problems will be immediately reported to the maintenance supervisor.

3.5 Facility Inspections, Maintenance, and Records

A daily visual inspection of the facility is performed by designated personnel. Personnel take water level measurements in the brine pond which is located approximately 200 feet downslope from well #58. Any oil sheen on the brine pond will be immediately reported to the maintenance supervisor. Enroute to the brine pond, a visual inspection of the pipe network is made and any problems are immediately reported to the maintenance supervisor. Akzo personnel will keep all records necessary in accordance with the regulations. Any of the aforementioned problems will be noted on the records. These records will be kept on file for at least 3 years.

Prior to the injection process, the pump valves and piping will be visually inspected. Maintenance of the pump is performed as needed.

The secondary containment area will be thoroughly inspected before each use and all necessary repairs will be completed before its use.

3.6 Security

Security measures at the facility consist of the following:

1. A perimeter chain link fence surrounds the facility.
2. Akzo personnel generally inspect the site twice daily, except for holidays.
3. Valves which would permit discharge of the oil trapped within the solution cavity are closed and the pipe is secured with a bolted flange plate.

4.0 COUNTERMEASURES AND CONTROLS

4.1 General

Akzo employees responsible for inspections or injections are familiar with procedures for cleanup and reporting of a spill. The location of on-site cleanup equipment such as straw bales, excavating equipment, absorbent pads and containment booms will be easily accessible and determined by the plant manager. These employees will be notified of any change in location of this equipment. In the case of the on-site heavy equipment, such as an excavator, the responsible supervisor will contact the designated operator for immediate response to the spill. The responsible supervisor is responsible for contacting any outside contractors to assist in the cleanup of the spill.

Names and phone numbers of personnel who may be called by the responsible supervisor of the facility in the event of a spill can be found in Table 1.

The roles and responsibilities of the Akzo personnel responsible for implementing this SPCC Plan are summarized in Table 2.

4.2 Injection Process

A secondary containment system has been designed to control the release of oil. The secondary containment system is a reinforced concrete floor slab with concrete curbing. The containment floor slopes toward the east where any collected product will be removed and disposed of properly.

The containment system was designed to contain 5,500 gallons of fuel oil, which is 110% of the volume of the oil which will be delivered and transferred to the well during each delivery.

In the event of a spill Akzo will employ portable pumping equipment, transport vehicles, and spill clean-up contractors as necessary to control the spill. Storage of recovered oil may be accomplished through the use of empty on-site or off-site tanks or drums. The plant manager may inject this oil back into the well if the quality of the recovered oil is acceptable for reuse and the spill was not a direct cause of well damage or failure. Residual oil will be cleaned up using absorbents.

Any oil spilled outside the secondary containment will require a prompt response. Containment of a spill outside the secondary containment system will consist of constructing berms and ditches, and the placement of straw bales or other absorbent material as necessary. A cleanup contractor may be contacted depending on the size of the spill and equipment availability.

Cleanup will consist of removing all contaminated soil, debris, etc. and placing it into suitable containers for proper disposal. Any free standing oil will be pumped into holding tanks or vacuum trucks designed for this purpose.

All equipment used in the cleanup effort will be decontaminated and/or disposed of properly.

Names and phone numbers of facility and other personnel who may be called by the maintenance supervisor of the facility in the event of a spill can be found in Table 1.

4.3 Annulus Leak

An annulus leak may result in a release both inside and outside the secondary containment system. A spill outside the secondary containment would require prompt response to contain the spill. The spill would be immediately reported to the responsible supervisor and containment would immediately begin, followed by cleanup.

Containment may consist of stopping the flow to or from the well, using on-site equipment to construct ditches and berms, and the placement of straw bales or other oil absorbent material in the channels or lake as necessary. A clean-up contractor will be notified immediately if the size of the spill exceeds the response capabilities of Akzo.

Clean-up will consist of removing all contaminated soil, debris, etc. and placing it into suitable containers for proper disposal. Any free standing oil will be pumped into holding tanks or vacuum trucks designed for this purpose.

All equipment used in the clean-up effort will be decontaminated and/or disposed of properly.

4.4 Production tubing

A production tubing failure may result in a release of oil into the brine pond. If oil is detected in the brine pond the responsible supervisor will be immediately notified and cleanup will commence. The brine pond will contain the spill and cleanup will consist of obtaining a contractor to skim the oil from the top of the brine pond with a vacuum truck designed for such purposes.

All equipment used in the cleanup effort will be decontaminated and/or disposed of properly.

5.0 PROTECTION OF SURFACE WATER

Emergencies that would result in a release of oil to surface waters such as drainage swales or Seneca Lake or to the brine pond would be responded to immediately.

Daily inspection and monitoring of the brine pond will be performed by Akzo personnel. If an oil sheen is evident the responsible supervisor will immediately be notified to commence cleanup. The source of the spill will be identified and corrective measures taken.

A release into the drainage swales or Seneca Lake would be immediately reported to the responsible supervisor. Akzo has a 200 foot boom which would be manually placed around the outlet of the drainage swale in Seneca Lake to prevent oil from spreading throughout the lake. The responsible supervisor will immediately notify the clean-up contractor and the NYSDEC. The source of the spill will be identified and corrective measures taken.

The boom, absorbent pads, straw bales, and a fire extinguisher will be kept in an enclosed building at 20 point, in the vicinity where the drainage swales enter the Lake. Also, straw bales will be stored near the well under tarps.

6.0 PROTECTION OF GROUNDWATER

Emergencies that would result in a release of oil to the groundwater would be responded to immediately.

A release into the ground would be immediately reported to the responsible supervisor. The responsible supervisor will immediately take proper corrective action and notify a clean-up contractor if necessary.

KSD/leb/pjl
d:\word\reports\akzo.doc
February 16, 1993

TABLE 1

Names and phone numbers of personnel who may be called by the responsible supervisor in an emergency.

Local Fire Department: 911

Local Police Department: 911

Ambulance: 911

POLLUTION CONTRACTOR

Primary: Allwash of Syracuse, Inc.
AWI Environmental Services, Inc.
Name: Environmental Contracting Specialists

Phone: (800) 633-9274 or (315) 454-4473

Alternate:

Name: Environmental Products and Services

Phone: (315) 471-0503

Construction Contractor:

Name: R&L Perry Construction, Inc.

Phone: (607) 535-4474

NYSDEC - Local Hotline:

(800) 457-7362

TABLE 2
Roles and Responsibilities of Facility Personnel

<u>Name/Title</u>	<u>Phone Number</u>	<u>Responsibilities</u>
Jim Loose Plant Manager	<u>535-2387</u>	Provides necessary resources to respond to a spill
A. James Edwards Engineer/General Maintenance Supervisor	<u>535-7585</u>	Directs all response activities and calls on response contractors.
Leroy Swartz Maintenance Supervisor	<u>546-8341</u>	Responsible for inspecting spill and assessing the need for outside contractors. Has the authority to direct outside contractor to respond. Responsible to train all personnel regarding spill prevention, control, and countermeasures.
Cal Coons Maintenance Foreman	<u>243-5339</u>	Responsible for maintaining in inventory and good condition all prevention, control, and countermeasure equipment. Responsible for supervising personnel involved in cleanup, including outside contractors.

During the off hours and weekends the Production Supervisor will be responsible for coordinating clean-up activities and has the authority to contact the outside contractor.

APPENDIX A

Spill Report

3-25-75
CHE

XC EJA



INTERNATIONAL SALT COMPANY
A PART OF ALZOR INC

WATKINS GLEN REFINERY
Watkins Glen, New York 14891
607/835-2721

February 27, 1975

New York State Department of
Environmental Conservation
P. O. Box 57
Avon, New York 14414

Attention: Mr. Dennis Sugumele

Dear Mr. Sugumele:

Per your request I have prepared the following brief description of the oil spill incident of February 17, 1975.

Oil was first detected in Seneca Lake at approximately 2:30 p.m. by Mr. Angelo Pangallo, an employee of International Salt Company, who was operating equipment in the brinefield at that time. He reported the observed oil to the Production Foreman on duty and myself immediately.

Mr. Pfiffer, Production Foreman, immediately went to investigate and within 45 minutes to 1 hour determined that the oil was entering the lake via a brinefield runoff creek and determined the source of the oil. The oil was spraying from a guage line on the wellhead of #49 Well. This Well is equipped with 3 pipes, an 8 5/8" tubing which has inside it a 5 1/2" tubing which in turn contains a 2 7/8" tubing. This Well operates as a trump well with water injection through the annulus between the 5 1/2" and 2 7/8" tubing and brine withdrawal from the 2 7/8" tubing. The outer annulus contains #2 fuel oil. This oil was injected into the well and serves as a pad to protect the cavity from vertical dissolving. The 8 5/8" casing does not extend as deep as the other two tubings into the cavity. Due to the difference in specific gravities of the liquids the oil is in the outer annulus at the surface. The only connection to this annulus is a 1/2" nipple, valve and pressure guage. The spill occurred when the piping between the valve and the wellhead bent due to an ice build-up and distorted the pipe in such a manner as to allow a spray of oil to discharge.

When the source of the leak was discovered, we immediately contacted a local contractor to trench the area in an attempt to collect the oil and made plans to place straw in the runoff streams to absorb as much of the oil as possible. I

Continuation of Letter to:

INTERNAT. SALT COMPANY

New York State Department of
Environmental Conservation

Attention: Mr. Dennis Sugumele

called Mr. Lawton, Local Conservation Officer, at 3:40 p.m. and told him of the problem. He came to investigate immediately and assisted plant personnel in the placing of straw at various places in the brinefield. The faulty pipe was replaced at approximately 5:00 p.m. and the leak stopped.

We added more straw during the evening and dug a second trench to intercept the runoff water before it entered the creek which flows east into Seneca Lake.

At approximately 7:00 p.m., Mr. Finster of the D. E. C. and Mr. Baldwin of E. P. A. investigated the spill.

The following morning we changed straw where necessary and pumped the oily water from both pits into 55 gallon drums. We have since removed all the oil laden straw from the creeks and removed the oily water from the area.

If there are further questions, please feel free to call.

Very truly yours,

INTERNATIONAL SALT COMPANY

James A. Loose
Engineering and General
Maintenance Superintendent

JAL/bf

cc: Mr. Gordon Aitken